



Pick Your Path to Health

What Alcohol Does to Your Metabolism

Breaking it Down for You

It's your vacation with the "girls." You're laying on a lounge chair on a sandy beach. The sun is warm and you can hear the waves of the crystal-clear, turquoise ocean. You pick up your frosted, salt-rimmed glass of margarita, topped with a small wedge of lime. You bring it to your lips, take a sip, and think about how the tequila is on its journey down your esophagus, gliding, sliding, and taking a right turn into the stomach and the intestinal track. You look at your watch; you're almost halfway through your drink. It's been about 25 minutes now, and you think about how the margarita is now being absorbed and broken down by enzymes in the stomach, and being converted in the liver. After another 30 minutes, as you drink your last few drops of the 'rita, you are hoping your liver has enough cytochrome P450 enzymes to properly metabolize or break down the remaining drops so that it can be removed from the blood before it builds up and overflows to the rest of your body. You surely don't want it to overflow and damage your cells and organs. You just had new ones built.

Well, that's probably not what you would think about when you're on vacation. But, that is pretty much the process of metabolism. Whether it's with a hamburger you just ate or a sip of wine, any substance you put into your mouth has to be broken down into substances that your body can effectively use. Because alcohol is a toxic or poisonous substance to your body, your body has to work extra hard to break down the alcohol content and oxidize or detoxify the blood before it goes throughout the body. If you drink more than your body can metabolize at a given time, the alcohol will go throughout your body and affect your organs and brain.

Woman to Woman

"I'm a recovering alcoholic, so I know my experience isn't like the average woman who can drink without a problem," starts Dee Dee Allen of Washington, D.C. "But when I was drinking, I could easily down four drinks or three beers in an hour. That's the other thing; I mixed a lot of drinks. Once I got started, I was off to the races. As far as how it affected me physically, I truly believe it contributed to my high blood pressure. My

pressure was always on the high borderline during my 20s, but when I gave up drinking, it has been normal and actually pretty good."

According to the National Institute on Alcohol Abuse and Alcoholism, women metabolize the same quantities of alcohol at a slower rate than men do. Three factors may be the basis for the differences. First, women have a lower body water content than men and this contributes to women having higher concentrations of alcohol in the blood. Second, women have smaller amounts of the enzyme involved in metabolizing alcohol. And third, women's hormones, especially during their menstrual cycle may affect the rate of alcohol metabolism. When alcohol isn't completely metabolized in the liver and is then passed throughout the body, it can have some very damaging effects.

Because a woman's body ability to metabolize alcohol isn't as effective as a man's body, a woman who may drink **less** than a man is still **more** susceptible to the damaging effects of alcohol. Women have a higher incidence of alcohol-induced liver disease, are more vulnerable to alcohol-induced brain damage and heart disease than men, and are at a greater risk for breast cancer. Alcohol also impairs blood sugar levels and the metabolism of calcium and bone, which can lead to bone disease such as osteoporosis.

"It's important for women to understand how drinking affects their bodies. It's all about knowledge and education and making informed choices," says Hope Depp, LICSW, M.Div, private-practice therapist and former clinical director of a local Washington, D.C. outpatient drug and alcohol treatment center. "If you know that drinking more than a couple of drinks in an hour or more than one or two drinks a day was harmful to your health, or that binge drinking puts you at risk for certain diseases and potentially could damage major organs, wouldn't you take a different approach to partying or happy hour? Most of the clients I've had had no idea about the physiological effects of alcohol, never were told, and simply just didn't know. "

Toeing the Line

So now you know. You are concerned and want to take an informed approach to drinking, if you choose to drink at all. Try the following steps to help you stay healthy.

- **Set limits.** Remember one or two drinks are usually the limit for proper absorption in a woman's body.

- **Avoid alcohol if you are taking medications (including acetaminophen).** Alcohol could negate the effects of the medicine and even be harmful
- **Avoid alcohol if you are planning to get pregnant or while trying to get pregnant.** Alcohol affects your reproductive system and could interfere with your chances of conceiving, and drinking while pregnant can hurt your baby.
- **Abstain from drinking if you have diabetes** or other conditions that are directly affected by alcohol.
- **Know your family history of breast cancer.** Alcohol increases your risk of developing breast cancer. Remember that alcoholic drinks have a lot of calories and can contribute to weight gain, and obese women are at greater risk for breast cancer. It can also contribute to early menopause.
- **Take calcium supplements.**
- **Eat food when drinking alcohol.** Food in the stomach helps the absorption rate. Don't drink on an empty stomach.
- **Stick with what you know.** Stick with the same drink, don't mix and match.
- **Try alcohol-free or virgin drinks.** They taste about the same. Herbal teas and hot ciders are also nice. Throw an alcohol-free party.
- **Be cautious of events or people where alcohol is always the focus.** Go to the movies, go bowling, have a make-up, dominos, or cards party without alcohol. It's the friends and the togetherness that makes it enjoyable, not alcohol.
- **Get more information and help if you need it.** Talk to your physician about how to get help if you need it. Contact the National Clearinghouse for Alcohol and Drug Information at 1-800-729-6686 to learn more.

Don't let alcohol take you away from the path to a more healthy you.
For additional information and treatment assistance:

National Institute on Alcohol Abuse and Alcoholism, www.niaaa.nih.gov,
301-443-3860

National Women's Health Information Center, Office of Women's Health,
U.S. Department of Health and Human Resources, www.4woman.gov, 1-
800-994-WOMAN

The National Drug and Alcohol Treatment Referral Routing Service, 1-800-
662-HELP.

Pick Your Path to Health is a national public health education campaign sponsored by the Office on Women's Health within the U.S. Department of Health and Human Services. For more information about the campaign, please call 1-800-994-WOMAN or 1-888-220-5446 (TDD), or visit the National Women's Health Information Center at <http://www.4woman.gov/> To request weekly health tips by e-mail, click on the box that says, "Click Here for weekly health tips by e-mail."